

976-20 PCT US seq list with priority claims  
SEQUENCE LISTING

&lt;110&gt; Center for Genetic Engineering and Biotechnology

<120> ANTIBODY FRAGMENTS SPECIFIC FOR HUMAN CARCINOEMBRYONIC  
ANTIGEN (CEA)

&lt;130&gt; 976-20 PCT/US

&lt;140&gt; Unassigned

&lt;141&gt; 2004-10-19

&lt;150&gt; PCT/CU2003/000005

&lt;151&gt; 2003-04-28

&lt;150&gt; CU2002/0086

&lt;151&gt; 2002-04-09

&lt;160&gt; 21

&lt;170&gt; PatentIn Ver. 2.1

&lt;210&gt; 1

&lt;211&gt; 39

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: oligo

&lt;400&gt; 1

ggggatatcc accatgract tcgggytgag ctkggtttt

39

&lt;210&gt; 2

&lt;211&gt; 29

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: oligo

&lt;400&gt; 2

aytccacac acaggrccag tggatagac

29

&lt;210&gt; 3

&lt;211&gt; 40

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: oligo

&lt;400&gt; 3

ggggatatcc accatggagw cacakwctca ggtctttrta

40

&lt;210&gt; 4

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

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<223> Description of Artificial Sequence: oligo

<400> 4

actggatggt gggaagatgg a

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<210> 5

<211> 14

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: linker I

<400> 5

Glu Gly Lys Ser Ser Gly Ser Gly Ser Glu Ser Lys Val Asp  
1 5 10

<210> 6

<211> 5

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: linker II

<400> 6

Gly Gly Gly Gly Ser  
1 5

<210> 7

<211> 39

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: oligo

<400> 7

tctcacagtg cacaggaagt gaagctggtg gagtctggg

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<210> 8

<211> 63

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

<400> 8

gtcgactttg gattcggagc ctgatacctga ggatttaccc tctgaggaga ctgtgagagt ggt  
60 63

<210> 9

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

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<400> 9  
gagggtaaat cccaggatc aggctccgaa tccaaagtcg acgacattgt gatgaccag 60  
tc 62

<210> 10  
<211> 37  
<212> DNA  
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<223> Description of Artificial Sequence: oligo

<400> 10  
aaggaaaaa gcggccgctt tcagctccag cttggtt 37

<210> 11  
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<212> DNA  
<213> Artificial Sequence

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<223> Description of Artificial Sequence: oligo

<400> 11  
agagccgccg ccacctgagg agactgtgag agtggt 36

<210> 12  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: oligo

<400> 12  
ggtggcggcg gctctgacat tgtgatgacc cagtct 36

<210> 13  
<211> 108  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: vector

<400> 13  
cctttctatt ctcacagtgc acaggaaatc aaagcggccg cagggtccga acaaaaactc 60  
atctcagaag aggatctgaa ttcccatcat catcaccatc actaataa 108

<210> 14  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: oligo

<400> 14

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gttggttcctt tctattctca c 21

<210> 15  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: oligo

<400> 15  
ctcttctgag atgagttttt gtgc 24

<210> 16  
<211> 241  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: scFv

<400> 16  
Glu Val Lys Leu Val Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Gly  
1 5 10 15  
Ser Leu Lys Phe Ser Cys Ala Ala Ser Gly Phe Pro Phe Asn Arg Tyr  
20 25 30  
Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val  
35 40 45  
Ala Phe Ile Ser Ser Asp Gly Ile Ala Tyr Tyr Ala Asp Ser Val Lys  
50 55 60  
Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Arg Asn Ile Leu Tyr Leu  
65 70 75 80  
Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala  
85 90 95  
Arg Val Tyr Tyr Tyr Gly Ser Ser Tyr Phe Asp Tyr Trp Gly Gln Gly  
100 105 110  
Thr Thr Leu Thr Val Ser Ser Glu Gly Lys Ser Ser Gly Ser Gly Ser  
115 120 125  
Glu Ser Lys Val Asp Asp Ile Val Met Thr Gln Ser Pro Lys Phe Met  
130 135 140  
Ser Thr Ser Val Gly Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln  
145 150 155 160  
Asn Ala Gly Thr Asn Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser  
165 170 175  
Pro Lys Ala Leu Ile Tyr Ser Ala Ser Ser Arg Asn Ser Gly Val Pro  
180 185 190  
Asp Arg Ile Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile  
195 200 205  
Ser Asn Val Gln Ser Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr

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210

215

220

Asn Ser Tyr Pro Leu Val Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu  
225 230 235 240

Lys

<210> 17

<211> 232

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: diabody

<400> 17

Glu Val Lys Leu Val Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Gly  
1 5 10 15

Ser Leu Lys Phe Ser Cys Ala Ala Ser Gly Phe Pro Phe Asn Arg Tyr  
20 25 30

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val  
35 40 45

Ala Phe Ile Ser Ser Asp Gly Ile Ala Tyr Tyr Ala Asp Ser Val Lys  
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Arg Asn Ile Leu Tyr Leu  
65 70 75 80

Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala  
85 90 95

Arg Val Tyr Tyr Tyr Gly Ser Ser Tyr Phe Asp Tyr Trp Gly Gln Gly  
100 105 110

Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Asp Ile Val Met  
115 120 125

Thr Gln Ser Pro Lys Phe Met Ser Thr Ser Val Gly Asp Arg Val Ser  
130 135 140

Val Thr Cys Lys Ala Ser Gln Asn Ala Gly Thr Asn Val Ala Trp Tyr  
145 150 155 160

Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile Tyr Ser Ala Ser  
165 170 175

Ser Arg Asn Ser Gly Val Pro Asp Arg Ile Thr Gly Ser Gly Ser Gly  
180 185 190

Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser Glu Asp Leu Ala  
195 200 205

Glu Tyr Phe Cys Gln Gln Tyr Asn Ser Tyr Pro Leu Val Thr Phe Gly  
210 215 220

Ala Gly Thr Lys Leu Glu Leu Lys  
225 230

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<210> 18  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: oligo

<400> 18  
 catgccatgg ggaatccgaa gtgaagctgg tggag 35

<210> 19  
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 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence: oligo

<400> 19  
 catgccatgg atcccggggt gatggtgatg gtgatg 36

<210> 20  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: diabody MS

<400> 20  
 gactggttcc aattgacaag c 21

<210> 21  
 <211> 255  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: diabody MS

<400> 21  
 Glu Val Lys Leu Val Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Gly  
 1 5 10 15  
 Ser Leu Lys Phe Ser Cys Ala Ala Ser Gly Phe Pro Phe Asn Arg Tyr  
 20 25 30  
 Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val  
 35 40 45  
 Ala Phe Ile Ser Ser Asp Gly Ile Ala Tyr Tyr Ala Asp Ser Val Lys  
 50 55 60  
 Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Arg Asn Ile Leu Tyr Leu  
 65 70 75 80  
 Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala  
 85 90 95  
 Arg Val Tyr Tyr Tyr Gly Ser Ser Tyr Phe Asp Tyr Trp Gly Gln Gly

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105

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Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Asp Ile Ile Met  
115 120 125  
Thr Gln Ser Pro Lys Phe Met Ser Thr Ser Val Gly Asp Arg Val Ser  
130 135 140  
Val Thr Cys Lys Ala Ser Gln Asn Ala Gly Thr Asn Val Ala Trp Tyr  
145 150 155 160  
Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile Tyr Ser Ala Ser  
165 170 175  
Ser Arg Asn Ser Gly Val Pro Asp Arg Ile Thr Gly Ser Gly Ser Gly  
180 185 190  
Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser Glu Asp Leu Ala  
195 200 205  
Glu Tyr Phe Cys Gln Gln Tyr Asn Ser Tyr Pro Leu Val Thr Phe Gly  
210 215 220  
Ala Gly Thr Lys Leu Glu Leu Lys Ala Ala Ala Gly Ser Glu Gln Lys  
225 230 235 240  
Leu Ile Ser Glu Glu Asp Leu Asn Ser His His His His His His  
245 250 255